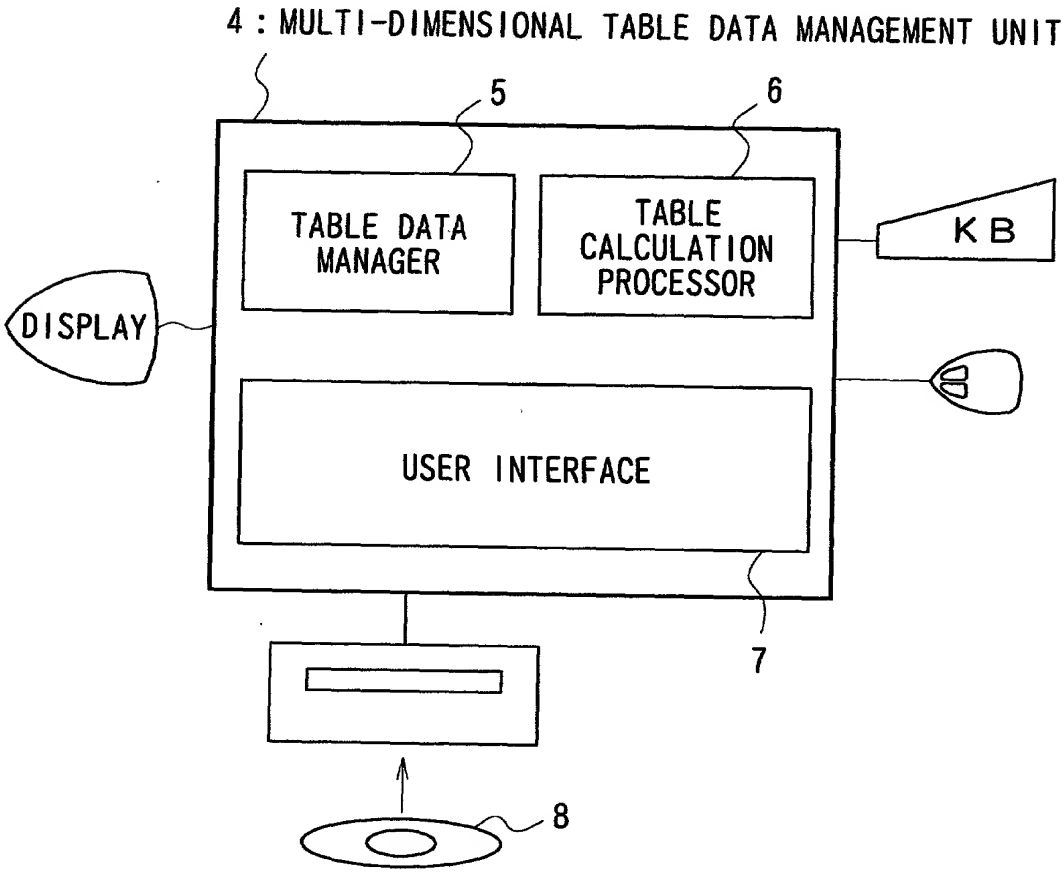
4 : MULTI-DIMENSIONAL TABLE DATA MANAGEMENT UNIT
5
6
TABLE DATA MANAGER
TABLE CALCULATION PROCESSOR
KB
DISPLAY
USER INTERFACE
7
8

Fig.1

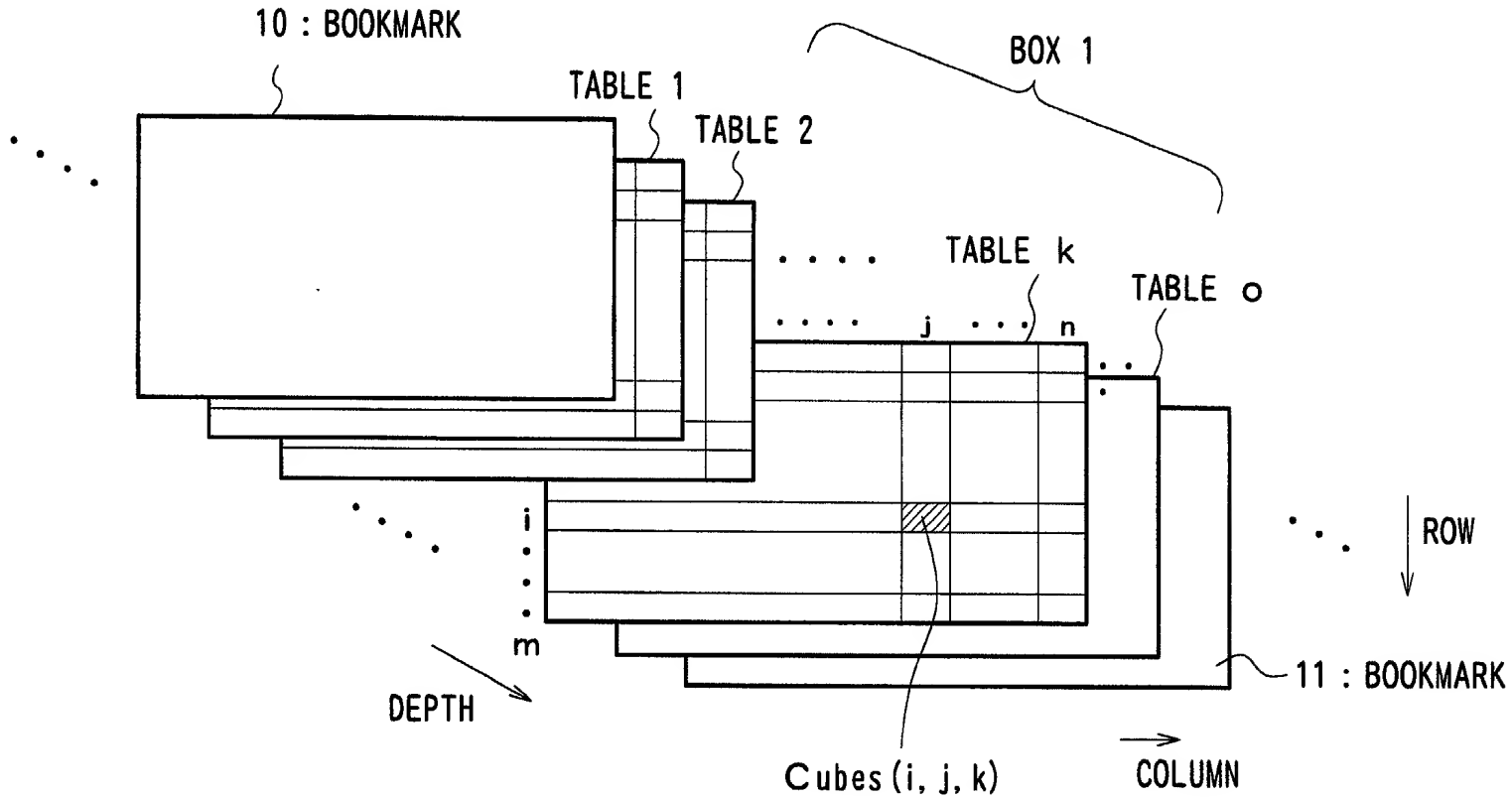
10 : BOOKMARK
TABLE 1
TABLE 2
BOX 1
TABLE k
TABLE o
j
n
i
m
ROW
DEPTH
Cubes (i, j, k)
COLUMN
11 : BOOKMARK

Fig.2

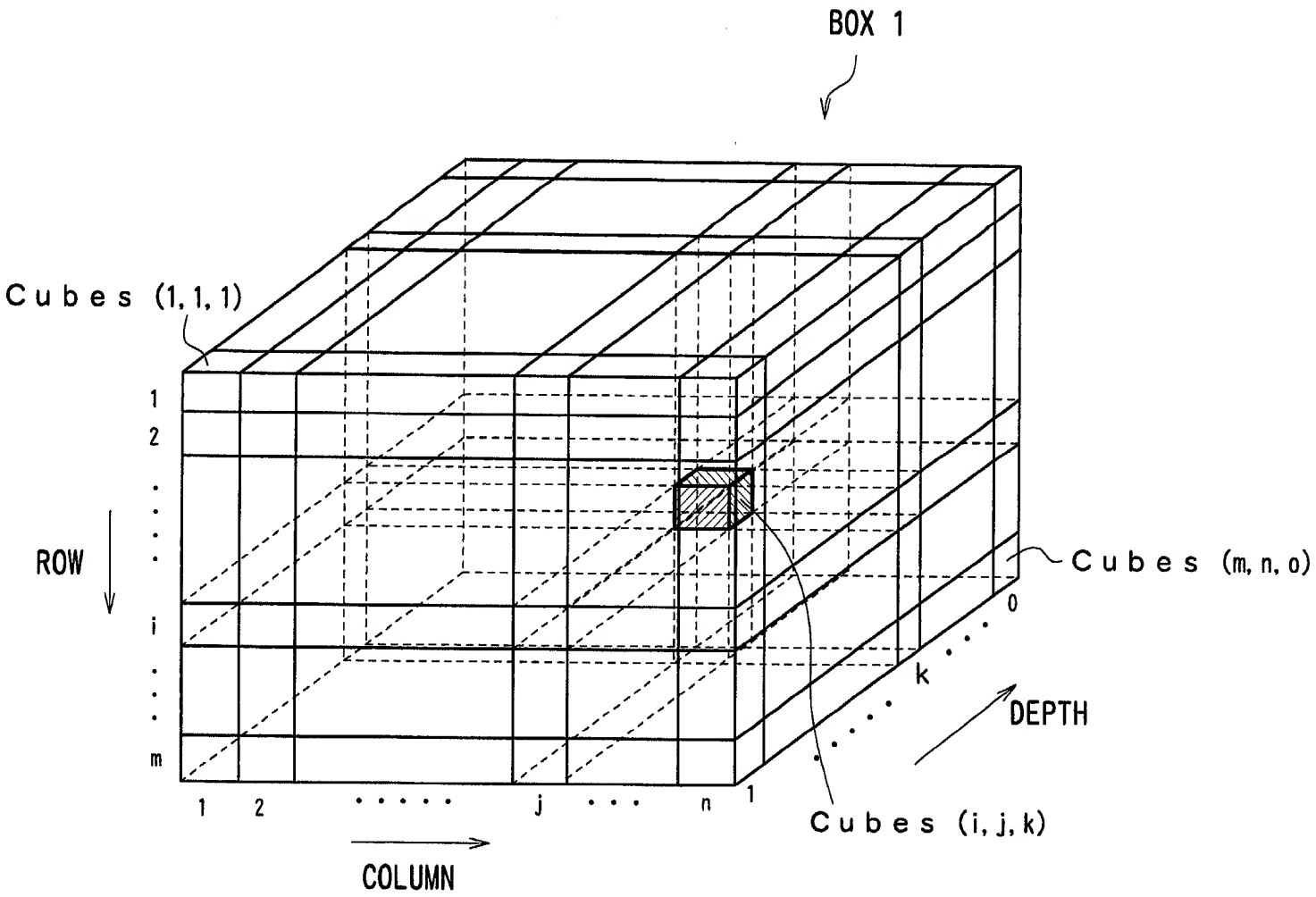
BOX 1
Cubes (1, 1, 1)
1
2
ROW
i
m
1
2
j
n
COLUMN
Cubes (m, n, o)
o
k
1
DEPTH
Cubes (i, j, k)

Fig.3

EXAMPLE OF SORT BY CULUMN

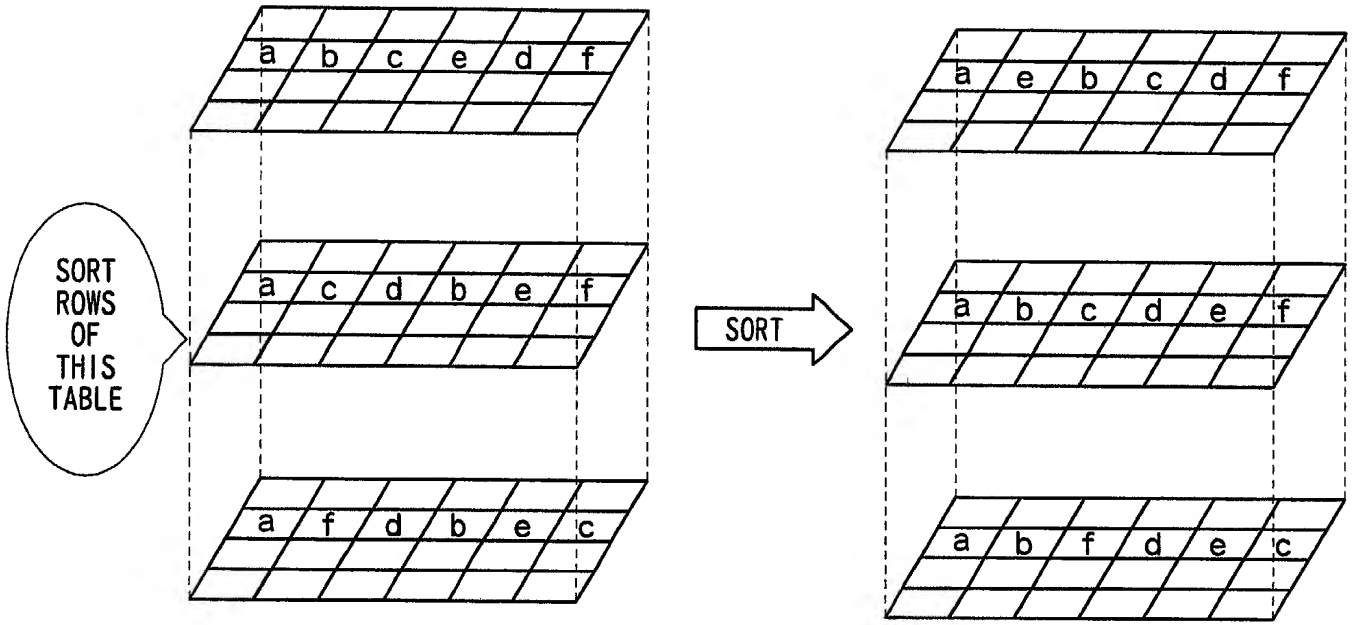

Fig.4

EXAMPLE OF SORT BY ROW

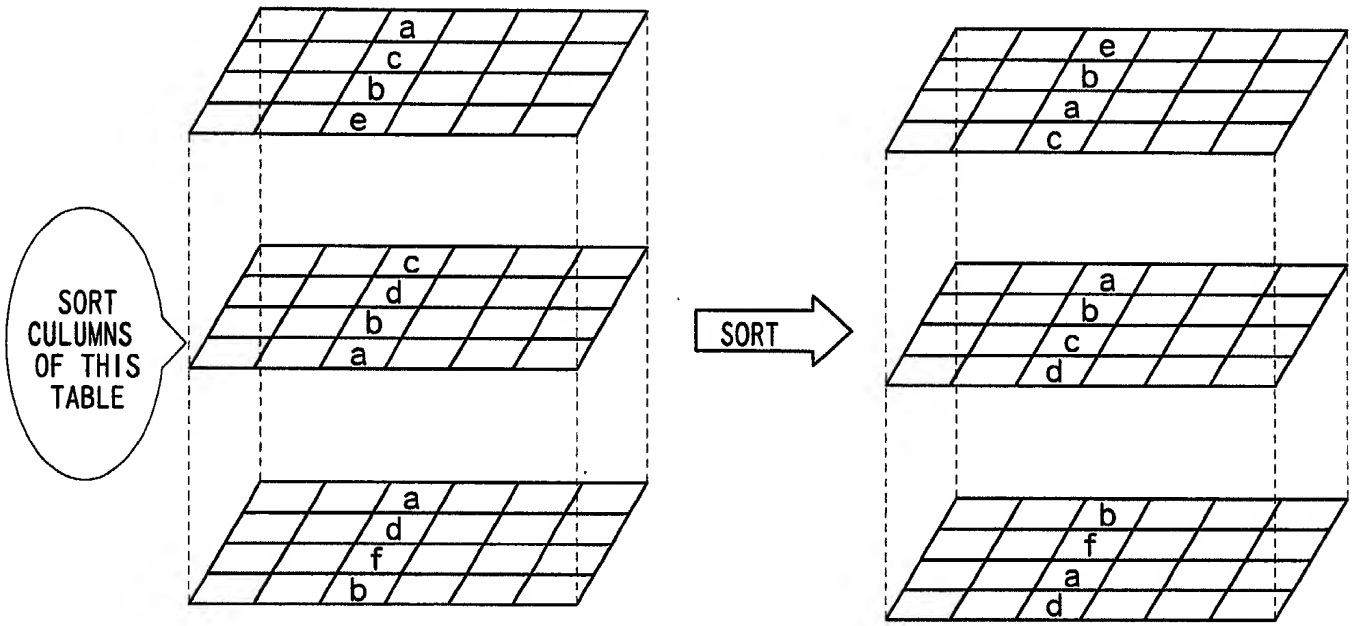

Fig.5

EXAMPLE OF SORT BY DEPTH

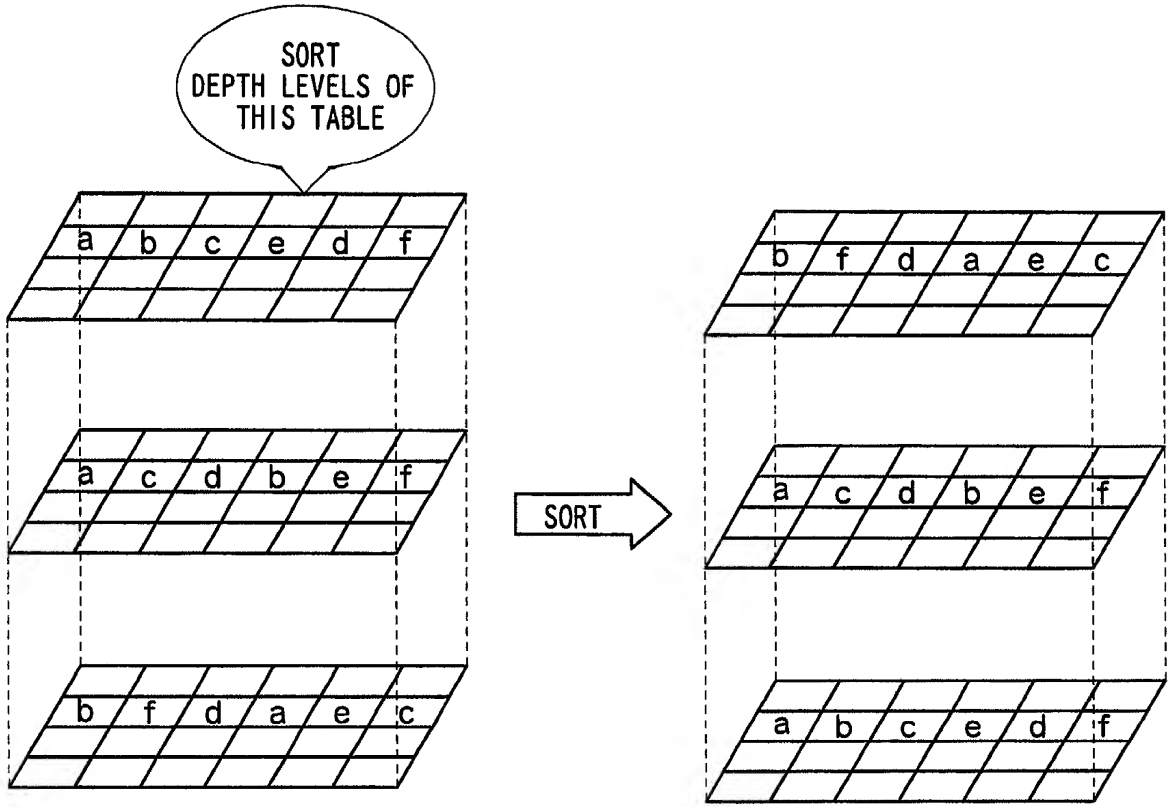

Fig.6

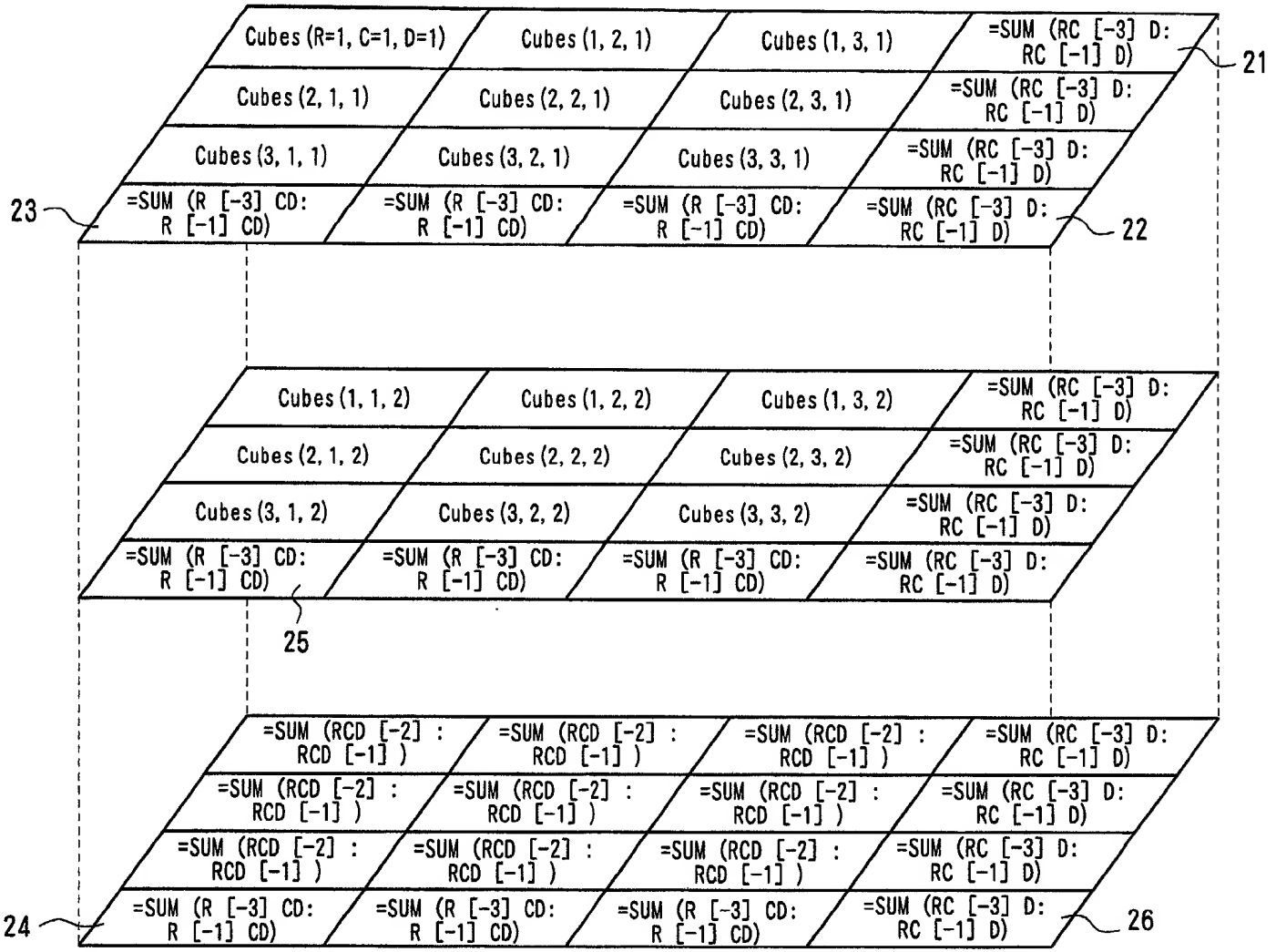
Cubes (R=1, C=1, D=1)
Cubes (1, 2, 1)
Cubes (1, 3, 1)
=SUM (RC [-3] D: RC [-1] D)
21
Cubes (2, 1, 1)
Cubes (2, 2, 1)
Cubes (2, 3, 1)
=SUM (RC [-3] D: RC [-1] D)
Cubes (3, 1, 1)
Cubes (3, 2, 1)
Cubes (3, 3, 1)
=SUM (RC [-3] D: RC [-1] D)
23
=SUM (R [-3] CD: R [-1] CD)
=SUM (R [-3] CD: R [-1] CD)
=SUM (R [-3] CD: R [-1] CD)
=SUM (RC [-3] D: RC [-1] D)
22
Cubes (1, 1, 2)
Cubes (1, 2, 2)
Cubes (1, 3, 2)
=SUM (RC [-3] D: RC [-1] D)
Cubes (2, 1, 2)
Cubes (2, 2, 2)
Cubes (2, 3, 2)
=SUM (RC [-3] D: RC [-1] D)
Cubes (3, 1, 2)
Cubes (3, 2, 2)
Cubes (3, 3, 2)
=SUM (RC [-3] D: RC [-1] D)
=SUM (R [-3] CD: R [-1] CD)
=SUM (R [-3] CD: R [-1] CD)
=SUM (R [-3] CD: R [-1] CD)
=SUM (RC [-3] D: RC [-1] D)
25
=SUM (RCD [-2] : RCD [-1])
=SUM (RCD [-2] : RCD [-1])
=SUM (RCD [-2] : RCD [-1])
=SUM (RC [-3] D: RC [-1] D)
=SUM (RCD [-2] : RCD [-1])
=SUM (RCD [-2] : RCD [-1])
=SUM (RCD [-2] : RCD [-1])
=SUM (RC [-3] D: RC [-1] D)
=SUM (RCD [-2] : RCD [-1])
=SUM (RCD [-2] : RCD [-1])
=SUM (RCD [-2] : RCD [-1])
=SUM (RC [-3] D: RC [-1] D)
24
=SUM (R [-3] CD: R [-1] CD)
=SUM (R [-3] CD: R [-1] CD)
=SUM (R [-3] CD: R [-1] CD)
=SUM (RC [-3] D: RC [-1] D)
26

Fig.7

EP 0 951 054 A2

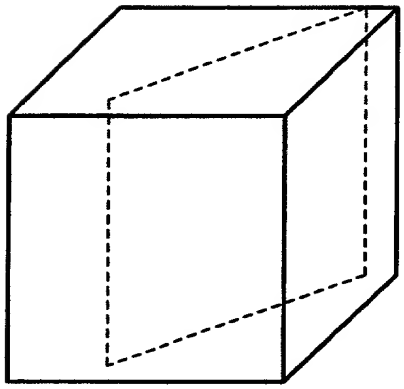

Fig.8

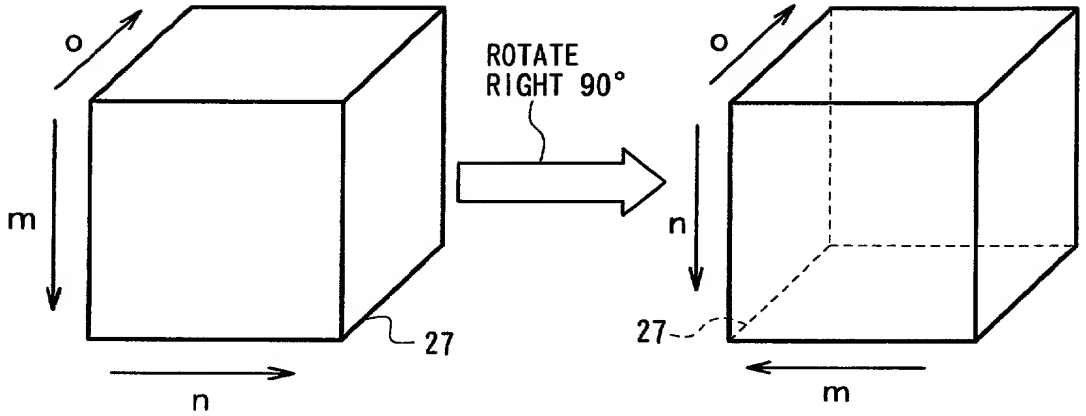

Fig.9

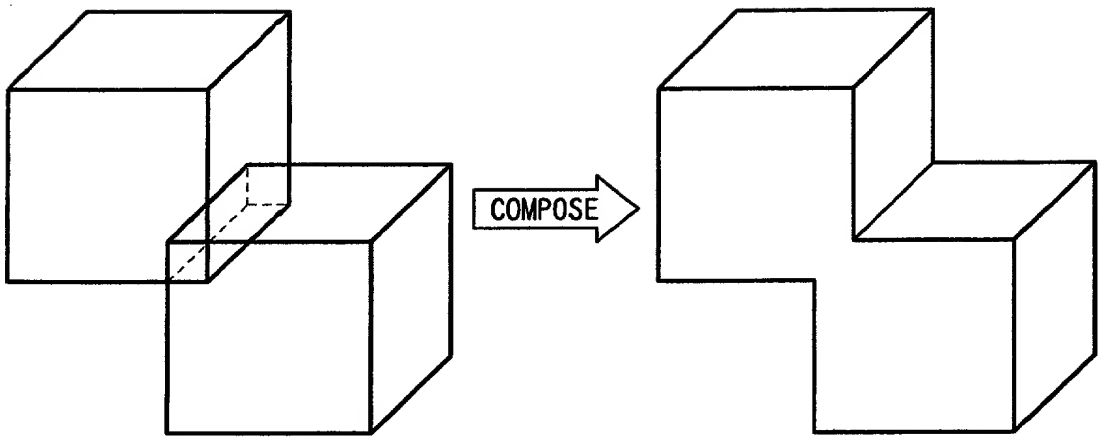

Fig.10

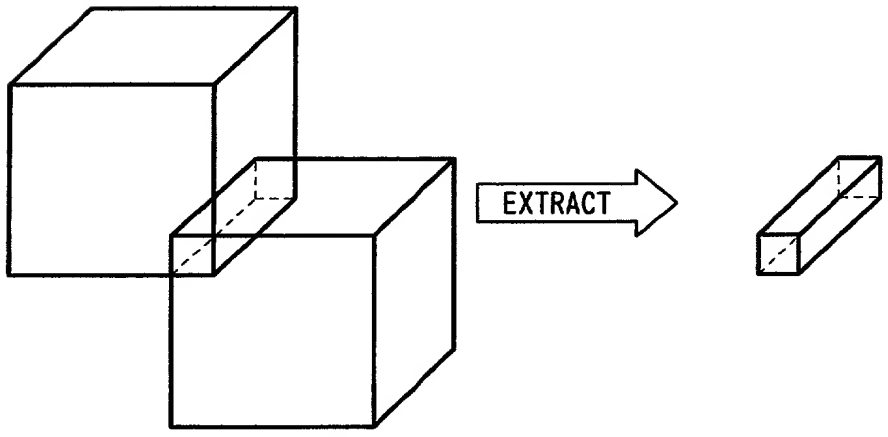

Fig.11

EP 0 954 954 B1

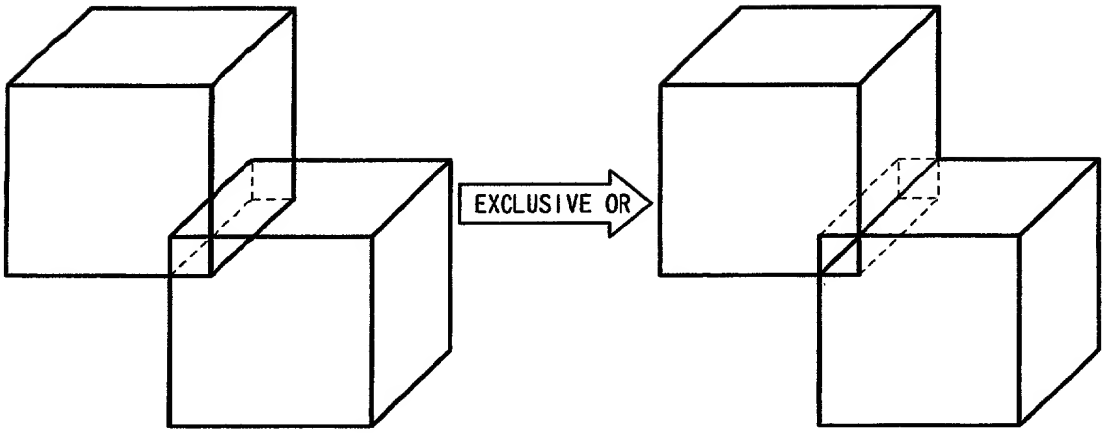

Fig.12

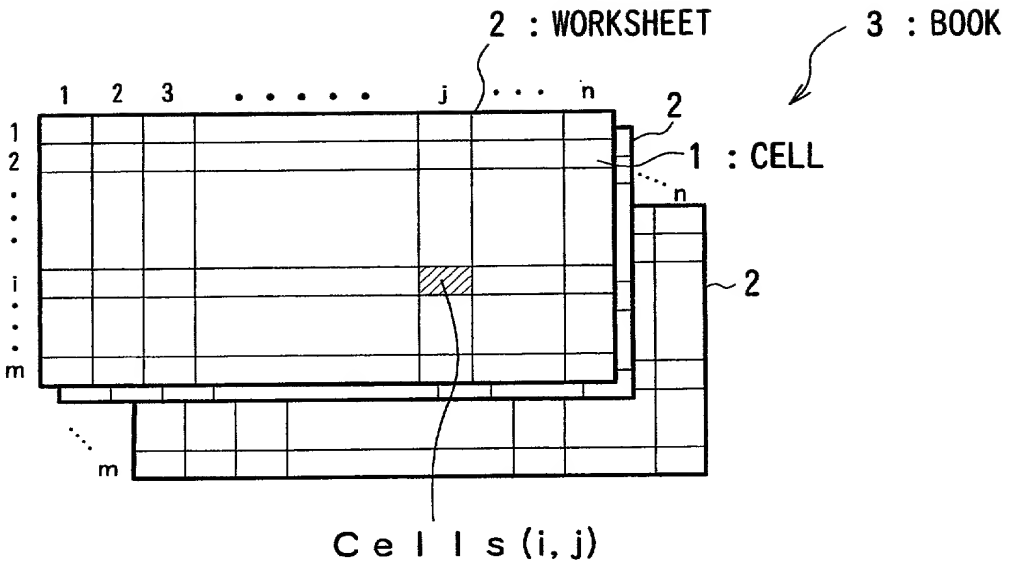

Fig.13 PRIOR ART